

United States Patent and Trademark Office

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

DATE MAILED: 01/12/2004

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.	
09/325,951	06/04/1999	MIN-HSIUNG CHIANG	TSMC98-262	3488	
28112 7:	590 01/12/2004		EXAMINER		
GEORGE O. 28 DAVIS AV	SAILE & ASSOCIAT	POMPEY, RON EVERETT			
	SIE, NY 12603		ART UNIT	PAPER NUMBER	
	·		2812	_	

Please find below and/or attached an Office communication concerning this application or proceeding.

		Applicati	Applicati n No. Applicant(s)					
Office Action Summary			09/325,95	1	CHIANG ET AL.			
			Examiner		Art Unit			
		Ron E Por		2812				
	The MAILING DATE of this communication appears on the cover sheet with the correspondence address Period for Reply							
A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION. - Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication. - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely. - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication. - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). - Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b). Status								
1)🖂	Responsive to communication(s) file	d on <u>10 Se</u>	eptember 2	<u> 203</u> .				
2a)□	This action is FINAL . 2b)⊠ This action is non-final.							
3)	Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under <i>Ex parte Quayle</i> , 1935 C.D. 11, 453 O.G. 213.							
Disposition of Claims								
4)⊠	Claim(s) 6-16 is/are pending in the application.							
	4a) Of the above claim(s) is/are withdrawn from consideration.							
5)	Claim(s) is/are allowed.							
6)⊠	☐ Claim(s) 6-16 is/are rejected.							
7)	Claim(s) is/are objected to.							
8)□	Claim(s) are subject to restrict	tion and/or	r election re	quirement.				
Applicati	ion Papers							
-	The specification is objected to by the			–				
10)	The drawing(s) filed on is/are:							
	Applicant may not request that any object							
44	Replacement drawing sheet(s) including		•	- · ·	•	, ,		
11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.								
Priority under 35 U.S.C. §§ 119 and 120								
 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f). a) All b) Some * c) None of: 1. Certified copies of the priority documents have been received. 2. Certified copies of the priority documents have been received in Application No. 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)). * See the attached detailed Office action for a list of the certified copies not received. 13) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78. a) The translation of the foreign language provisional application has been received. 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78. 								
Attachment(s)								
2) Notic	ce of References Cited (PTO-892) ce of Draftsperson's Patent Drawing Review (P mation Disclosure Statement(s) (PTO-1449) P		······································		nary (PTO-413) Paper No(nal Patent Application (PT0			

Application/Control Number: 09/325,951 Page 2

Art Unit: 2812

DETAILED ACTION

Claim Rejections - 35 USC § 103

- 1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
 - (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
- 2. Claims 6-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thakur et al. (US 5,712,186) in further view of Kim (US 3,853,496).

Thakur discloses the steps of:

oxidizing the silicon substrate locally at a first temperature (316, fig. 3a) of at least above 1100 degrees centigrade through the patterned silicon nitride mask layer to form silicon oxide dielectric field oxide (FOX) isolation layers;

oxidizing the silicon substrate further at a second temperature (316, fig. 3c) no greater than 1100 degrees centigrade (col. 5, ln. 19 – ln. 50).

Thakur discloses the claimed invention except the limitation of substrate is single crystalline silicon of (100) crystal orientation.

However, Kim discloses a silicon wafer of (100) orientation. A substrate of this orientation provides for oxidation to occur easily.

Application/Control Number: 09/325,951 Page 3

Art Unit: 2812

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ron E Pompey whose telephone number is (571) 272-1680. The examiner can normally be reached on flex schedule.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Niebling can be reached on (703) 308-3325. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Ron Pompey

Art Unit: 2812

December 31, 2003

John F. Niebling Supervisory Patent Examina

Technology Center 2800